

Amendments to the claims:

1-9. (canceled).

10. (original): A method of marking a paper document comprising:

receiving a first signal comprising plural encoded bits of data;

receiving a second signal comprising an orientation component, the orientation component corresponding to a predetermined frequency domain orientation component;
and

in a paper document production process, including a step that imparts into a surface topology of the paper document the first signal and the second signal to thereby steganographically mark the paper document.

11. (original): The method of claim 10, wherein the orientation component comprises plural impulses.

12. (new): A method of marking a paper document comprising acts of:
receiving a signal comprising plural bits of data and an orientation component, the orientation component having characteristics observable in at least one transform domain;
and

imparting into a surface topology of a paper document a representation of the signal to thereby steganographically mark the paper document, wherein the representation of the signal is machine-readable from optical scan data representing at least a portion of the paper document.

13. (new): The method of claim 12 wherein the transform domain comprises a frequency domain.

14. (new): The method of claim 12 wherein the paper document comprises a synthetic.

15. (new): The method of claim 12 wherein said imparting utilizes a de-watering element.

16. (new): A method of marking a document comprising acts of:
- receiving a plural-component signal, wherein at least one component of the plural-component signal has characteristics that are observable in at least one transform domain; and
- shaping a surface of a document in accordance with the plural-component signal to thereby steganographically mark the document, wherein the plural-component signal is machine-readable from optical scan data representing at least a portion of the document.
17. (new): The method of claim 16 wherein the transform domain comprises a frequency domain.
18. (new): The method of claim 16 wherein the document comprises a synthetic.
19. (new): The method of claim 16 wherein said shaping utilizes a de-watering element.
20. (new): The method of claim 16 wherein the plural-component signal comprises a plural-bit message.
21. (new): The method of claim 16 wherein the plural-component signal comprises an orientation component.